Cattle

DTH-response:

CFP10 has been tested on both *M. avium* and *M. bovis* infected animals. In *M. avium* infected (ppdA positive) animals no DTH response was measured compared to *M. bovis* (ppdB positive) infected where a significant DTH response was observed in many of the cattle. Further more blood cells isolated from cattle infected with *M. bovis* induced an *in vitro* proliferative response and release of IFN-γ after stimulation with CFP10.

IN THE CLAIMS

Please cancel Claims 1-55, without prejudice toward the further prosecution of these claims in Continuation and/or Divisional Application.

Please add the following new claims:

(New) A purified polypeptide, wherein said purified polypeptide is expressed by a recombinant cell host, and

wherein said recombinant cell host contains a polynucleotide,

wherein said polypeptide is encoded by said polynucleotide, and

wherein said polynucleotide is selected from the group consisting of:

- a) a polynucleotide comprising the nucleotide sequence of SEQ ID NO 1;
- b) a polynucleotide comprising the nucleotide sequence of SEQ ID NO 2, or a biologically active polynucleotide derivative of SEQ ID NO 2;

- a polynucleotide comprising the nucleotide sequence of SEQ ID NO 3, or a biologically active polynucleotide derivative of SEQ ID NO 3;
 - d) a polynucleotide comprising the nucleotide sequence of SEQ ID NO 4;
- e) a polynucleotide comprising at least 12 consecutive nucleotides of a polynucleotide selected from the group consisting of SEQ ID NO 2, SEQ ID NO 3, and SEQ ID NO 4;
- f) a polynucleotide having a sequence fully complimentary to a polynucleotide selected from the group consisting of SEQ ID NO 2, SEQ ID NO 3, and SEQ ID NO 4; and
- g) a polynucleotide hybridizing under stringent hybridization conditions with polynucleotide selected from the group consisting of SEQ ID NO 2, SEQ ID NO 3, and SEQ ID NO 4.
- 57. (New) A purified polypeptide of Claim 56 which is selected from the group consisting of:
 - a) a polypeptide which comprises the amino acid sequence of SEQ ID NO 5;
 - b) a polypeptide comprising:
 - i) from amino acid in position 1 to amino acid in position 48 of SEQ ID NO 5; or
 - ii) from amino acid in position 8Q to amino acid in position 100 of SEQ ID NO 5;
 - c) a polypeptide comprising at least one antigenic portion of a polypeptide a) or b).
- 58. (New) An oligomeric polypeptide comprising at least two units of a polypeptide according to Claim 57.
- 59. (New) The oligomeric polypeptide of Claim 58 comprising up to 10 units of a polypeptide according to Claim 57.
- 60. (New) A purified polypeptide comprising at least one antigenic portion of a polypeptide according to Claim 57.

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60. (New) A purified polypeptide comprising at least one antigenic portion of a polypeptide according to Claim 57.

- 61. (New) The purified polypeptide according to Claim 60, wherein an antigenic portion of the polypeptide of sequence SEQ ID NO 5 is selected from the group consisting of:
 - a) the polypept de of SEQ ID NO 6;
 - b) the polypeptide of SEQ ID NO 7;
 - c) the polypeptide of SEQ ID NO 8;
 - d) the polypeptide of SEQ ID NO 9;
 - e) the polypeptide of SEQ ID NO 10;
 - f) the polypeptide of \$EQ ID NO 11;
 - g) the polypeptide of \$EQ ID NO 12; and
 - h) the polypeptide of SEQ ID NO 13.
- 62. (New) The purified polypeptide according to Claim 60, comprising from 2 to 10 antigenic portions of the polypeptide of SEQ ID NO 5.
- 63. (New) A purified polypeptide or an oligomeric polypeptide according to any one of Claims 56 to 62 which is a multiple antigen peptide construct.

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- 64. (New) A purified polypeptide or an oligomeric polypeptide according to any one of Claims 56 to 62 which comprises an additional T-epitope.
- 65. (New) An immunogenic composition, comprising a purified polypeptide or an oligomeric polypeptide according to any one of Claims 56 to 62.
- 66. (New) A composition comprising a purified polypeptide or an oligomeric polypeptide according to any one of Claims 56 to 62.

- 67. (New) The composition according to Claim 66, wherein said composition comprises additionally an antigenic protein from *Mycobacterium tuberculosis* or an antigenic portion of an antigenic protein from *Mycobacterium tuberculosis*.
- 68. (New) The composition according to Claim 67, wherein said composition comprises additionally the ESAT-6 antigenic protein or an antigenic portion of the ESAT-6 protein.
- 69. (New) A diagnostic method for detecting the presence of *Mycobacterium*7

 tuberculosis in the serum of a patient, said diagnostic method comprising the steps of:
- a) incubating a serum sample which may contain *Mycobacterium tuberculosis* antibodies with a purified polypeptide or an oligomeric polypeptide according to any one of Claims 56 to 62, for a time sufficient to form an antigen-antibody complex between said *Mycobacterium tuberculosis* antibodies and said purified polypeptide or oligomeric polypeptide;
 - b) detecting any said antigen-antibody complex formed; and
- c) relating the detection of said antigen-antibody complex to the presence of *Mycobacterium tuberculosis*
- 70. (New) A diagnostic kit for the in vitro diagnosis of an infection by

 Mycobacterium tuberculosis, comprising the following elements:
- a) a purified preparation of a purified polypeptide or an oligomeric polypeptide according to any one of Claims 56 to 62;
- b) suitable reagents for detecting any antigen/antibody complexes formed, said reagents preferably carrying a label compound, or being recognized themselves by a labeled reagent;